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EXAMINER	
MARTINEZ, DAVID E	

ART UNIT	PAPER NUMBER
2182	5

DATE MAILED: 11/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/932,334	Applicant(s) ROBERTSON, IAIN	
	Examiner David E Martinez	Art Unit 2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 August 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4, 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1, applicant describes "said remote queue counter connected to said data source for incrementing said remote count upon allocation of data at said data source to be stored in said first-in-first-out buffer memory, connected to said data destination for decrementing said remote count and generating a decrement confirmation signal upon transfer of data out of said first-in-first-out buffer memory to said data destination" [claim 1, lines 14-21] In the body. Applicant is not clear as to which, either the remote queue counter or the data source, is connected to the data destination.

As per claims 2-3, they are dependent on claim 1 thus rejected under the same reason.

Claim 4 recites the limitation "said master queue" [claim 4, line 6] and "said master count" [claim 4, line 7]. There is insufficient antecedent basis for this limitation in the claim. Is this the master queue counter of claim 1? Claim 1 set forth a "master queue counter" but not a "master queue".

Claim 6 recites the limitation "remote queue counter" [claim 6, line 5]. There is insufficient antecedent basis for this limitation in the claim.

Due to the vagueness and a lack of clear definiteness in the articles used in the claims, the claims have been treated on their merits as best understood by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,401,149 to Dennin et al.

As per claim 1, Dennin teaches a data transfer apparatus transferring data from a data source to a data destination comprising:

a first-in-first-out buffer memory [fig 4, element 302, column 7 lines 35-41] having an input connected to the data source, an output connected to said data destination [figs 3,4 column 6 line 46 to column 7, line 12] and a predetermined number of data entries [fig 4, element 402, column 7, lines 35-41];

a master queue counter [fig 4, element 414] storing a master count indicative of a number of data entries available for data storage within said first-in-first-out buffer memory [column 8, lines 57-61], said master queue counter connected to the data source to decrement said master count upon allocation of data at said data source to be stored in said first-in-first-out buffer memory [fig 4, element 130 bus to data source];

a remote queue counter [fig 4, element 414] storing a remote count indicative of a number of data entries within said first-in-first-out buffer memory currently storing data [column 8, lines 57-61], said remote queue counter connected to said data source for incrementing said remote count upon allocation of data at said data source to be stored in said first-in-first-out

buffer memory [fig 4, element 130 bus to data source], connected to said data destination for decrementing said remote count [fig 4, element 414, is part of the FIFO memory element 302, that is connected to the data destination, figs 3,4 column 6 line 46 to column 7, line 12] and generating a decrement confirmation signal upon transfer of data out of said first-in-first-out buffer memory to said data destination; and

wherein said master queue counter is further connected to said remote queue counter for incrementing said master count upon receipt of said decrement confirmation signal [fig 4, element 414 has both the master queue counter and the remote queue counter in it. It is inherent that the remote queue counter generates a decrement confirmation signal upon transfer of data out of the FIFO buffer memory to the data destination and send that signal to the master queue counter for incrementing it so it keeps track of the units that are free (not in use) inside the FIFO as described in column 8, lines 57-61].

As per claim 2, teaches the data transfer apparatus of claim 1, wherein:

said master queue counter is initialized to said predetermined number of data entries of said first-in-first out buffer memory; and said remote queue counter is initialized at zero [column 8, lines 42-56 describe how write and read pointers are initialized to their corresponding values upon a power up or a reset of the system. This system being based on RAM memory [column 7, lines 36-41], which is volatile memory, loses all data within its cells when a power up or a reset is done. It is inherent that when a power up or a reset is done in RAM, the whole RAM will be free (not in use) thus the master queue counter be equal to the maximum size of the RAM and the remote queue counter be equal to zero, since the cells are empty].

As per claim 3, Dennin teaches the data transfer apparatus of claim 1, wherein:

said data source may allocate data to said first-in first-out buffer memory only if said master queue counter indicates a non-zero number of data entries available for data storage within said first-in-first-out buffer memory [column 13, lines 12-26]; and

said data destination reads said first-in-first-out buffer memory only if said remote queue counter is non-zero [column 12, lines 25-47].

As per claim 4, Dennin teaches the data transfer apparatus of claim 1, wherein:

said data source may selectively annul allocation of data of said data source to be stored in said first-in-first-out buffer memory, said data source generating an annul increment signal upon annulling data [column 11, lines 21-25, column 12, table 2, column 12, lines 20-25]; and

said master queue is further connected to said data source to increment said master count upon receipt of said annul increment signal [column 12, lines 20-25].

As per method claim 5, Dennin teaches a method of transferring data from a data source to a data destination comprising the steps of:

maintaining a master count [fig 4, element 414] indicative of a number of data entries available for data storage within a first-in-first-out buffer memory [column 8, lines 57-61];

allocating data from the data source to the first-in first-out buffer memory only when the master count is non zero [column 13, lines 12-26];

decrementing the master count upon allocation of data at the data source to be stored in the first-in-first-out buffer memory [fig 4, element 130 bus to data source];

maintaining a remote count indicative of a number of data entries within the first-in-first-out buffer memory currently storing data [column 8, lines 57-61];

incrementing the remote count upon allocation of data at said data source to be stored in said first-in-first-out buffer memory [fig 4, element 130, bus to data source];

transferring data from the first-in-first-out buffer memory to the data destination only if the remote count is non-zero [column 12, lines 25-47];

decrementing the remote count upon transfer of data out of the first-in-first-out buffer memory to the data destination; and

incrementing the master count upon confirmation of decrementing of the remote count [fig 4, element 414 has both the master queue counter and the remote queue counter in it. It is inherent that the remote queue counter generates a decrement confirmation signal upon transfer of data out of the FIFO buffer memory to the data destination and send that signal to the master queue counter for incrementing it so it keeps track of the units that are free (not in use) inside the FIFO as described in column 8, lines 57-61].

As per method claim 6, it is of the same scope as that of claim 2 above thus rejected under the same rationale.

As per method claim 7, it is of the same scope as that of claim 4 above thus rejected under the same rationale.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. 6,504,824 B1 to Tanaka et al.

US Patent No. 6,055,285 to Alston.

US Patent No. 6,349,372 to Benveniste et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E Martinez whose telephone number is (703) 305-4890. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey A Gaffin can be reached on (703) 308-3301. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

DEM

JEFFREY GAFFIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100